formation
General Rev 7.10 Information

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No new printed instruction manual has been prepared for rev 7.10 of the WARP SPEED SOFTWARE disk. The REV 7 USER MANUAL of 1986 is for the most part still accurate, and is your best guide to make the fullest use of your HAPPY ENHANCED disk drive. This back side information menu has been added to provide the user with online help in using the newest features of your HAPPY drive. All of this additional documentation may also be printed on your printer, by selecting that option.

All of the programs on the front side of the WARP SPEED SOFTWARE disk behave as explained in the USER MANUAL, except the BOOTER MENU program, and the SECTOR COPIER program.

The BOOTER MENU program has been improved so that it now recognizes a 256K RAM DISK which behaves like the NEWELL 256KXL. Please note that only the SECTOR COPIER makes use of the RAM DISK memory. Other programs on the WARP SPEED SOFTWARE DISK do not use a RAM DISK. The SECTOR COPIER has several new features which are documented by pressing 6 from this back side menu.

Naturally, the rev 7.10 disk has the latest advances in disk backup for your Atari 8 bit computer. These improvements allow HAPPY COMPUTERS to honestly claim that our product backs up not just some, but ALL of the programs we have ever seen. These backups are ALL made without modifying the program that was originally written by the author, so you know they will work correctly, the way the author intended. No other disk backup system can honestly make this claim. For more information on this topic, select item 4 from this back side menu.

These disk backup improvements are by virtue of new PDB files, and changes to our SECTOR COPIER program. Selecting items 6 and 9 from this back side menu will give you complete information of these improvements. Using your printer, you can also get a print out of the information contained in all PDB files by selecting item 2 from this back side menu.

WARP SPEED DOS is already created and placed on this back side of the disk. You may enter the DOS menu by pressing D from this menu. You can create a self booting WARP SPEED DOS disk by formatting a disk, and writing DOS files from the DOS menu. You must still follow the instructions printed in the rev 7 USER MANUAL if you want to create a WARP SPEED DOS disk that has the AUTO SHRINK feature.

A new feature in the WARP SPEED SOFTWARE is the IBM file converter. The information on using this powerful tool is obtained by selecting item 5 from this back side menu. The REV 7 USER MANUAL does not have any information on this feature. You can call this program directly from this back side

menu by pressing I.

HAPPY COMPUTERS has been helping Atari users backup programs since 1982. We have also offered disk drive repair service since that time. By offering these services and products, we have satisfied over ten thousand people throughout the known parts of the galaxy. With over five years of experience, we have proven to our customers that we have some of the most qualified persons when it comes to solving problems related to Atari disk drives, and disk backup. We have identified the most common of these problems and have the solutions documented. Selecting items 7 and 8 from this back side menu lets you tap into this knowledge storehouse.

We must admit that the REV 7 USER MANUAL is a little weak on its explanation of the creation and use of the RUN TIME DISK. With version 7.10, only the backup of the program SYNFILE requires the usage of a RUN TIME DISK. Select item 3 from this back side menu for a more detailed explanation of backing up and using SYNFILE.

SYNFILE backup: further information

SYNFILE backup: further information

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We have seen a version of SYNFILE which does not require the use of our PDB file or RUN TIME DISK to back up. Before continuing with these instructions, try to make a backup of your original SYNFILE disk using the normal mode of the HAPPY BACKUP program. If that fails to produce a working backup, then proceed with these instructions.

Prior to rev 7.10, several ELECTRONIC ARTS programs required a RUN TIME disk. With the addition of PDB file number 27 on the front of the rev 7.10 disk, these ELECTRONIC ARTS programs no longer require a RUN TIME DISK. The backup of SYNFILE made with PDB file number 4 from the front side of the WARP SPEED SOFTWARE disk still requires a RUN TIME DISK.

The original SYNFILE program is on one side of one disk. The backup requires two disk sides. These two disk sides may either be two separate disks, or the front and back of one disk. The first side, let us call it side A, is made by copying the original SYNFILE disk with PDB file number 4 on the front side of the rev 7.10 disk.

The second side, let us call it side B, is made by using the normal mode of the HAPPY BACKUP PROGRAM. No PDB file is used to make side B. Specific tracks are copied using the HAPPY BACKUP PROGRAM's normal mode. The tracks to copy are displayed by the DISPLAY INFO screen of the HAPPY backup program when you have selected PDB file number 4. This side B disk we call the RUN TIME DISK.

To make side B, you first boot the front side of the WARP SPEED SOFTWARE

rev 7.00 or later. Select the HAPPY BACKUP PROGRAM by pressing 4. Answer N for NO, no PDB file used. Select the SPECIAL RECOVERY MENU by pressing S from the HAPPY BACKUP PROGRAM. Request the "SELECT TRACER TRACKS" option by pressing T. The HBP will now display each track number from 0 to 39 and ask Y/N/X, as documented in the REV 7 USER MANUAL. You will be selecting tracks 0, and 19 to 39 as "YES" tracks. Press Y when "TRACK 0 Y/N/X" is displayed. Press Y when "TRACK 19 Y/N/X" through "TRACK 39 Y/N/X" is displayed. Press N when any other track (1-18) is displayed. After pressing Y from track 39, select "COPY PER TRACER" by pressing T. Use the original SYNFILE disk as the source disk, and your side B disk as the destination disk. Do not use side A made by the PDB file as the destination disk. You may use the other side of the disk from side A.

To use the backup created in this manner, you first boot the computer using the side A disk. Once the program has completely booted in, you take out side A, and continue using side B for any disk access that you would normally use the original SYNFILE disk for. For example, the CREATE function of SYNFILE needs side B, the run time disk, in the drive.

Side B is the run time disk, which means that it is a disk used while the program is running. Only use side A for booting, and only use side B, which is the so called run time disk, while the program is running after the computer has booted side A. It's really simple to have side A on the front of a disk, and side B on the back. Just boot the front side, and then turn the disk over!

Please note that you can use the normal mode of the HAPPY BACKUP program to make further backups of either Side A, or Side B disks. You should only use the PDB file when making the side A backup from the original SYNFILE disk.

Unprotecting programs ???
Unprotecting programs ???

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HAPPY COMPUTERS is the only company that can honestly claim to offer a product that backs up all of the disk programs we have seen for the Atari 8 bit computer. Our product is easy to use, and reliable. A program backed up by our product will be identical to the original program. Using our product to make backups of disks is legal.

Several other companies offer products which claim to remove the copy protection from copy protected disks. They claim that this allows them to make backups without the need for special disk drive hardware. On the surface, this may seem desirable; but let's look a little further.

To remove the copy protection from a program, the program must be modified. However this is accomplished, the result is that the modified program never

works exactly like the original program. Although a modified program may appear to work correctly, there is always some risk in using it. For example, a modified utility may scramble and loose a whole disk full of data, which may have taken months to accumulate. You may never know if the score you achieved from a modified game was fair, or if your modified game is going to crash and lock up your computer when you finish the next level of difficulty.

Only the original author who wrote the program knows all of the changes needed to have an unprotected copy. The persons that modify programs to remove the protection can never be certain about their task; if they knew exactly how the entire program worked, they could have written it themselves. It would be foolish to think that the original author would tell anyone how to remove the protection.

Modifying a copyrighted work is illegal! The copyright law specifically prohibits the creation of a derivative work. A program that is modified is derived from the the original; it is not a backup of the original. Why does the law prohibit this? The modified program will usually bear the title and most aspects of the original program. It may even still bear the name of the author. But since the program is modified, it does not work exactly as the author intended and it may malfunction.

If the only version of a program available was modified and malfunctioned, you may be fooled into believing that the author's work was defective. In fact, only the illegally modified program was defective. The pride of authorship is destroyed by this unfair activity. This unfair situation is what the law attempts to prevent.

Companies that sell products that modify programs cause their customers to break the law. Only time will tell how long they can stay in business doing this. The real truth is that no one has come up with a product which backs up everything like HAPPY COMPUTERS! The garbage collection of other backup devices and programs is really disgusting when compared with our product. Only by using products that incorporate HAPPY COMPUTERS' ingenuity can people make perfectly functioning and legal backups.

**** DO WE CARE ???

HAPPY COMPUTERS does not side with any aspect other than the perfectly legal need of our customers to make a backup of their disk. The fair use provision of the USA copyright law makes it perfectly legal to do this. The fair use provision does not imply that authors should give up any other rights provided by the copyright laws. We do not break the law, and we don't want our customers to be forced to do this either. We also do not compromise the usefulness and value of programs by modifying them.

SOME BACKUPS RUN ONLY ON HAPPY DRIVE

Some of the disk backups made by our system require that the backup be run on a HAPPY ENHANCED disk drive. Actually only very few backups require this, when compared to the tremendous quantity of programs that backup without this requirement. Anyway, why is the need to run some backups only on the HAPPY required at all? The answer is simple. Without adding extra hardware, or other increased difficulty for the average user, a reliable backup can only be produced in this manner.

We must satisfy the needs of thousands of users. Therefore, the backup solutions we employ must be universally applied. We do not offer a variety of methods (otherwise called a collection of garbage as in the previous discussion), we offer one method that works reliably. Some of the solutions that HAPPY COMPUTERS has determined are NOT desirable include the following. Install additional circuit modification in the drive, which would decrease the reliability and service ability. In some cases, require that a specially erased disk be used as the destination disk. Require that the user open the disk door on the destination drive repeatedly (perhaps hundreds of times) until the desired type of bad sector had been written. Modify the program without even telling the user this had been done, while lying about how fantastic the backup device is. Install special circuitry inside the computer. Our customers do not need to use any of the above, and yet they can backup everything!

Is the backup program that only runs on a HAPPY drive modified? Absolutely NOT! The exact program is copied to the destination disk. The HAPPY drive is automatically programmed to emulate the protection on the disk while the disk is loading. Totally unknown to the program while it is loading, the HAPPY drive supplies exactly the same data, timing, and loading sequence that the original disk provided. Only the intelligence of the HAPPY drive can accomplish this feat, a standard drive cannot.

You may notice that backups of some of the newest programs do NOT require the HAPPY to run the backup. HAPPY COMPUTERS must judge each program and determine the most reliable back up method. Most new programs that do not copy directly with the normal mode of the HAPPY BACKUP PROGRAM will require a PDB file. By examining the original disk, HAPPY COMPUTERS can determine the PDB file characteristics needed, and produce the required PDB file.

You may find that a program not listed in a particular PDB file may appear to be backed up correctly by that PDB file. Appearances can be deceiving. It is best to let HAPPY COMPUTERS examine the original disk and determine if an existing PDB file works 100% correctly, or if a new one is needed to do the job.

We do not release new software versions every month. We try to include as many new features, and as much new back up capability as possible into each new revision. Each revision is also substantially tested to prove that each function works reliably, as our customers have come to expect.

IBM FILE CONVERTER INFORMATION
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INTRODUCTION

The IBM file converter will convert files from IBM PC DOS into

files on your 8 bit Atari personal computer. You must have a HAPPY ENHANCED 1050 disk drive to use this program. The 810 drive cannot read double density, which is needed for IBM PC floppies. We refer to IBM PC DOS, but this also includes most MS DOS compatible computers (PC clones).

This converter program transfers files from a diskette made and accessed by IBM PC DOS, into files that may be accessed by an Atari compatible DOS. The converter program also works in the opposite direction, creating diskettes with IBM PC DOS accessible files from diskettes made and accessed by an Atari compatible DOS.

Only files may be converted. Disks that do not contain files that may be accessed by DOS cannot be converted. This includes self booting disks, and disks that contain a custom file structure only supported by programs that do not allow DOS access to the files. The converter program needs to be loaded in with the Atari DOS that normally accesses the file.

VERY IMPORTANT!!!

The converter program will convert any file, without regard to the file's contents. Programs, text files, graphics, data bases, and all other files may be converted. It is the responsibility of the software that accesses the files to properly handle any operation performed with a file from a different computer! The converter doesn't care what's in the file, it simply makes the data accessible by the other computer.

To help you understand this, consider the following:

PROGRAMS FROM THE IBM PC DO NOT RUN ON YOUR ATARI, EVEN IF YOU CONVERT THEM.

By the same token, programs from the Atari do not run on the IBM PC, even if you convert them. Even though all of the bytes that make up the program are available in the converted file, the 6502 processor in your Atari does not understand the 8088 machine language in IBM PC programs, and vice versa. It may be possible to have some emulator hardware or sofware to accomplish this, but this is not available from HAPPY COMPUTERS.

Here is another example. If a data base file which was created by a program on your Atari is converted so it may be accessed by IBM PC DOS, you need a data base program that runs on the IBM PC that understands the structure of the data base file that was created by the Atari. Not only is it needed to convert the data, the software running on the other computer must be able to process the data. The situation is not impossible though. It is possible to have programs written in a higher level language that could be run, with little or no modification, on both the IBM PC and the Atari. You could create a data base with such a program, and access this data base with both computers, using our converter program.

Text files are most easily accessed by both computers. See the section below concerning text file translation. Without the deliberate effort to make files "understandable" to both computers, conversion of files is nearly pointless. You could at least use an IBM PC to download an Atari program from a BBS and then use our converter program to make an Atari readable file out of this program so you could run it on your Atari.

THE IBM PC DOS DISKETTES ACCESSED BY THE CONVERTER PROGRAM MUST BE FORMATTED

AS 40 TRACK SINGLE SIDED DISKS ON AN IBM PC, WITH 9 SECTORS PER TRACK.

The IBM readable disks cannot be formatted on your Atari. Although we had originally announced the ability to format IBM disks on the Atari, this has proved to be impossible, since the PC may have trouble reading disks that have data under the index hole. The Atari 1050 has no way of knowing where the index hole is, as it has no index sensor. These disks must be formatted by DOS 2 or later using the FORMAT A: /1 command. The resultant disk should have 179712 bytes available. Your double sided IBM PC drive will format a disk as single sided using the above command. Disks formatted as double sided cannot be accessed by the converter program.

ACCESSING THE CONVERTER PROGRAM

The converter program is located on the back side of the rev 7.10 WARP SPEED SOFTWARE disk. It is called "IBMXFR.AUT". It may be entered by first booting this back side, then pressing I from the menu. You will be operating under WARP SPEED DOS 7, which is our high speed version of Atari DOS 2.0s. This DOS only supports single density, and no RAM DISK. You may move the program to other disks, with other DOSes, and rename it as needed. For example, it may be renamed AUTORUN.SYS to auto load with Atari DOS. The converter program is a BINARY LOAD file, that loads in at memory location $3000, and automatically begins execution. The converter program should operate correctly with most DOS programs that run on your Atari PC, as it has been written to use DOS independent CIO for all its Atari file operations.

OPERATING THE CONVERTER PROGRAM

Upon initially loading the program, the user selects the quantity of drives, the drive that will be used for Atari files, and if two drives are selected, which HAPPY 1050 drive will be used as the IBM drive. When only one drive is selected, it must be a HAPPY 1050. With more advanced DOS programs, you may select the Atari drive as a RAM disk drive. You may also change your drive selection choice while using the program.

Using the program is straight forward. Select the number corresponding to the function you want as displayed on the menu. You may display the directory of either an IBM or an Atari disk. You may transfer files. If the file already exists on the destination disk (either IBM or ATARI) you will be asked if you want to delete it, or provide a new name. If you press reset while the program is doing a conversion, there may a loss of data on the destination disk.

TEXT FILE TRANSLATION

If you are going to transfer text files between the IBM and Atari, you should be aware that the IBM uses ASCII, while the Atari uses ATASCII, which is slightly different. The differences are mainly in control characters such as carriage return, tab, backspace, etc. Some word processor and printing programs for the Atari will operate in a true ASCII mode. If your IBM software for printing and word processing also operates in this mode, your IBM text files will be directly compatible and no translation will be required.

Some word processor and printing programs for the IBM and the Atari use a variety of special control characters that have no easy translation for the other computer's software. To use these types of programs it may be

necessary to write a custom translator program, which HAPPY COMPUTERS cannot provide. Some of these programs will provide this translation as a built in feature, so be sure you check the instructions for the software you are using.

Many text processing programs operate with files that contain only the special CARRIAGE RETURN and LINEFEED characters, besides normal printable characters. The Atari uses a single $9B character for CARRIAGE RETURN & LINEFEED, whereas the IBM uses the standard ASCII $0D $0A character sequence for this. The "IBMXFR" program from HAPPY COMPUTERS has the option to translate the CARRIAGE RETURN LINEFEED characters at the same time that file conversion is taking place. The user only needs to select TEXT TRANSLATION = YES from the menu.

During IBM to Atari file conversion, with TEXT TRANSLATION = YES selected, the $0D becomes $9B, and the $1A and $0A characters are dropped. During Atari to IBM file conversion, with TRANSLATION = YES selected, the $9B character becomes a $0D $0A character sequence, and a $1A END OF FILE byte is added at the end. When TEXT TRANSLATION = YES is selected, the program will operate somewhat slower.

With TEXT TRANSLATION = NO selected, all bytes from the source file are transfered to the destination without modification.

USEAGE WITH REV 1 ROM 1050

This program may not be used with a 1050 ENHANCEMENT that has a rev 1 ROM, while that drive has been programmed into the US EMU mode. The IBMXFR program will detect this condition. To use the IBMXFR program with the rev 1 ROM 1050 HAPPY, do not select US EMU mode. US EMU mode may be deselected by re-initializing the drive. The DOS and IBMXFR program will need to be reloaded to ensure that the DOS properly recognizes that the drive is not in US EMU mode.

ALLOWABLE FILE NAMES

The Atari filename typed in as either the source or destination filename is tested according to the rules of the particular Atari DOS you are using. The IBM filename is checked according to the rules established for IBM PC DOS. There may be occasion when a filename is permitted for an IBM file that is not permitted for an Atari file. It is the user's responsibility to select filenames during operation of this IBMXFR program, that adhere to the rules of allowed filenames for the particular Atari DOS begin used.

If you enter an IBM filename that is invalid as per the rules of IBM PC DOS, the message "INVALID FILENAME" results. If you enter an Atari filename that is invalid for the Atari DOS that the IBMXFR program is operating under, the message "UNABLE TO OPEN FILE" will result. This same message will result from other errors when trying to open an Atari file for reading or writing, not just invalid Atari filenames.

ADDITIONAL HELP

If you mistakenly put an IBM disk in a 1050 HAPPY drive when you should have put an Atari disk in, and you are reading from that drive, you can speed up

Never open the door while writing is taking place, even if the wrong disk is inserted. Wait for the drive to stop, or press SYSTEM RESET.

If you have trouble reading or writing disks on your Atari 1050 that were formatted and written with your IBM PC, or if you have trouble reading disks on your IBM PC that were written with your Atari 1050, here are some suggestions. First, the same information in this back side menu "SOLVING COMMON PROBLEMS" in the sections "PROBLEMS READING, WRITING, FORMATTING" and "PROBLEM READING ON DIFFERENT DRIVES" applies.

The Atari 1050 disk drive rotational speed is set to 288 RPM, the Atari convention. The IBM disk drive's speed is set to 300 RPM. This difference in speed may cause problems for some users. If you are having difficulty, you may experiment and see if drive speed is causing the problem. Temporarily adjust the 1050 drive's speed to 300 RPM, and see if the problem goes away. Make sure to re-adjust the 1050 drive speed back to 288 RPM after you are through. Note: the READ / WRITE test in our diagnostic would be expected to FAIL with the drive speed adjusted to 300 RPM. This does not mean that the drive has trouble reading or writing. It simply means that the test is not valid while the drive speed is set to 300 RPM.

There is another possibility. There may be a defect in the 2793 / 2797 IC in your 1050 drive. Atari disks are either 128 or 256 bytes per sector, and this is what our DIAGNOSTIC will test. The IBM format uses 512 bytes per SECTOR. The only IC which could be defective and allow the drive to be able to read and write 128 and 256 byte sectors but not 512 byte sectors is the 2793 / 2797. Note: some 1050s have a 2793, and some have a 2797, but not both.

REV 7.10 SECTOR COPIER
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The REV 7 USER MANUAL accurately describes the previous SECTOR COPIER (SCP) rev 7.00. The rev 7.10 SCP has some improvements that aren't documented in the manual.

The "INTRODUCTORY INSTRUCTIONS" option of the rev 7.00 SCP have been replace with the "MODE SELECTION" menu in rev 7.10.
Upon loading, the rev 7.10 SCP will ask if you want to backup "ATARI PLANETARIUM". If you answer Y for yes, then this must be the only program you copy, otherwise you must reload the SCP. Both the source and destination drive must be a HAPPY 1050 drive to use this feature. If no HAPPY 1050 drive is connected to the computer, turned on, and in HAPPY mode, the SCP program will not operate when Y is selected. If you answer yes to this first option, then the next

option discussed below is not applicable, and is not given. Answer yes only if you want to copy Atari Planetarium. When yes is selected, the only parameters you can change on the selection menu are the source and destination drive numbers. The SCP automatically configures itself to properly backup Atari Planetarium, no user selections are needed.

The next option will only be given when your personal computer does not have a RAMDISK supported by the SCP, and you have answered N for no, do not copy ATARI PLANETARIUM. Answering no to this second option will give you the maximum buffer size for copying. A computer with at least 48k memory can copy a single density disk in just 2 passes if no is selected. If you answer no, you cannot return to the SCP's "SELECTION MENU" (not mode selection) after you begin copying, and if an error is encountered when reading from the source disk, the copying process will stop. If you answer yes to this option, you will have a smaller buffer size for copying, so more disk insertions will be needed. This is really important only for those with one drive. Also if you answer yes, when an error is encountered during reading from the source disk, the option to ABORT or IGNORE is given to the user. If ignore is selected, then the SCP continues operation. Note that error sectors on the source disk are replaced with good status sectors on the destination disk. Some error sectors have valid data, and the SCP will copy this data even if there is a status error. This makes it possible to copy some defective disks with the rev 7.10 SCP.

If your personal computer has a supported RAMDISK, the above option is not asked by the SCP, the result will be as if you had answered yes.

Once the above options are given and answered, the SCP will ask you to verify your selection. Type N for no to not change your selection, type Y for yes to re-enter your selection. Once you type N for no, you may not reselect these options without reloading the SCP.

The top of the rev 7.10 SELECTION MENU displays information concerning the options you have selected.

The rev 7.10 SCP now directly supports the NEWELL 256KXL RAM DISK or equivalent. The rev 7.10 SCP may also be customized to support other similar 256K (or larger) RAM DISKS. With this much memory, it is possible to read in a full true double density disk, and write it out as many times as desired. The NEWELL 256KXL RAM DISK type is detected and displayed on the initial bootup of the BOOTER MENU program on the front side of the WARP SPEED SOFTWARE disk. As with other RAM DISKS, the SCP will automatically utilize the extra storage space with no user specification required.

If you have a 256K or larger RAM DISK other than the NEWELL in your PC, it may be sufficiently compatible with the NEWELL to be automatically recognized. In this case the BOOTER MENU and SCP will report that a NEWELL RAM DISK has been detected.

HAPPY COMPUTERS authorizes customization of the WARP SPEED SOFTWARE disk to allow usage of other similar RAM DISKS with the SCP, when the information below is followed.

DO NOT ATTEMPT TO CUSTOMIZE YOUR DISK UNLESS YOU COMPLETELY UNDERSTAND THE INFORMATION PROVIDED BELOW. DO NOT CUSTOMIZE THE ORIGINAL REV 7.10 DISK. DO YOUR CUSTOMIZATION TO A BACKUP COPY!

There are four areas on the WARP SPEED SOFTWARE DISK that must be customized to support a different 256K RAM DISK. First of all, the RAM DISK to be supported must be selectable in 16K BANKS, with the selected bank appearing in memory at $4000 to $7FFF. The address where the bank select control byte is stored must be $D301. The information provided here is to change a table of 12 bank select control bytes, and the RAM DISK name, both in two different places on the disk, for a total of four areas changed, as mentioned.

There are two copies of the RAM DISK bank select control bytes table. The original value of the 12 bytes in both of these tables are $83 $87 $8B $8F $E3 $E7 $EB $EF $C3 $C7 $CB $CF. These bytes are the RAM DISK bank select control bytes. The computer will store a value from the table into location $D301, and this selects a particular 16K bank. As each of the 12 values from the table are stored into location $D301, 12 different 16K banks of RAM DISK are available in the $4000 to $7FFF address space of the 6502. HAPPY COMPUTERS has recognized that many RAM DISK modifications use the $D301 address to store the bank select control byte. Different control bytes are required with different RAM DISKs to get the 12 banks selected.

During your customization of the rev 7.10 disk for your particular RAM DISK, you must change these bank select control bytes to the values needed to select 12 banks with your RAMDISK. The tables are located on the front side of the rev 7.10 WARP SPEED SOFTWARE disk in sector 3 at $3B offset, and in sector $3F at offset $3D. Do not modify any bytes other than these 12. Both tables must contain exactly the same sequence of 12 bytes!

The corresponding name for the RAMDISK should be changed. A new name which is exactly 13 ASCII characters long must be inserted in sector $C at offset 8. This is the name that will be displayed by the BOOTER MENU program when the customized RAM DISK type is detected. The rev 7.10 disk originally has "NEWELL 256KXL" in these 13 bytes. A new size which is exactly 5 ASCII characters may optionally be inserted into sector $44 at offset $5C. The rev 7.10 disk originally has "256KX" in these 5 bytes.

If your customization is correct, the BOOTER MENU will display your newly selected 13 character name, and the SCP will display the size. The BOOTER MENU program will test that each of the 12 bytes in the bank select control byte table does in fact select a unique bank of 16K before it will acknowledge that the RAM DISK has been detected.

Solving Common Problems
Solving Common Problems

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Although there may be other reasons why a problem occurs, presented here are the most common reasons, based on the 5 years of telephone help

experience we have given our customers to date.

PROBLEMS READING, WRITING, FORMATTING

Make sure you run all of the DIAGNOSTIC's tests, and read that section in our REV 7 USER MANUAL. Make sure your disk drive is at least 1 foot and preferably 2 feet away from your TV set or video monitor. Don't be fooled: if your disk drive has been too close to your TV, and your system seemed to work correctly so far, a read write problem can occur suddenly either with a particular disk, or as your TV or disk drive has normal wear. MOVE THE DISK DRIVE AWAY FROM THE TV NOW!!!

TROUBLE LOADING PURCHASED SOFTWARE

Solution - HAPPY ENHANCED drive needs to be in the SLOW or UNHAPPY mode to run the program. Read the first page of the REV 7 USER MANUAL. Also read about the CONTROLLER, the 810 SLOW/FAST switch, and the FORCED SLOW MODE option.

PROBLEM WRITING WITH SPARTA DOS

Applies only to the HAPPY 1050. The HAPPY 1050 must have FAST WRITING mode enabled when used with SPARTA DOS. Read the sections in the REV 7 USER MANUAL titled: "SET TO U.S. EMU" and "SET TO FAST WRITE".

PROBLEM READING ON DIFFERENT DRIVES

If disks that are formatted and written on one drive, cannot be read on another drive, and all other DIAGNOSTICS are okay, this usually means that one or both of the drives need radial head alignment. Either the drive that did the writing, or the one that cannot read, or both may be out of alignment. Alignment is not a "user adjustment". It must be performed by an experienced technician using a special disk, an oscilloscope, and a correct procedure.

The Atari 810 disk drive (not surplus 810s) with the door that is a lift up lever in the front center is notorius for going out of alignment, especially if the clamp that connects the stepper motor to the head carriage assembly is not tightened. This is the so called TANDON 810. The MPI 810, which has the push button pop open door has fewer alignment problems. We have seen both the TANDON and WST type 1050 drives out of alignment when they were brand new!

810 HAPPY DOESN'T WORK WITH REV 7

An upgrade is available to allow your 810 HAPPY drive to utilize the features of our newest version 7 software. With this upgrade installed, your 810 can be used together with a 1050 HAPPY drive to make backups with the HAPPY BACKUP PROGRAM.

This upgrade is only available from HAPPY COMPUTERS. Availability is limited. Contact our office for the latest information on obtaining the correct upgrade for your 810 HAPPY drive.

SOLVING BACKUP PROBLEMS

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UNREADABLE FORMAT MISCONCEPTION

Getting the message "UNREADABLE FORMAT" from the HAPPY BACKUP or COMPACTOR PROGRAM on some tracks may be normal. This may be part of the copy protection, or the diskette manufacturer may have not written anything to that track. That space on the disk may just not be used. Disks that you format in single density with DOS should not be UNREADABLE FORMAT unless there is a problem.

If the whole disk is "UNREADABLE FORMAT" then this disk is either blank, or is not single density. Only the SECTOR COPIER will backup ENHANCED DENSITY or TRUE DOUBLE DENSITY disks. For example, SILENT BUTLER and PLANETARIUM by Atari, VIDEO VEGAS, by BAUDVILLE, and the back side of the FLEET SYSTEMS II WORD PROCESSOR are all ENHANCED DENSITY. An 810 disk drive cannot read or copy these. The HAPPY 1050 can copy these using the SECTOR COPIER. The HAPPY BACKUP and COMPACTOR programs will report UNREADABLE FORMAT on all tracks with these or any other disks which are not single density.

ELECTRONIC ARTS SKEW ALIGNMENT

We have added PDB # 14 on the back side of the rev 7.10 disk as an aid to backing up the older ELECTRONIC ARTS PROGRAMS which used a very tight skew alignment. This PDB file improves the accuracy of making the backup by not measuring the skew on the source disk. This required skew has been pre-determined and stored in the PDB file. Any measurement inaccuracies in the source drive are eliminated. This PDB file also reduces the time required to make the backup.

Here are some suggestions to try if you have a problem backing up a program listed in PDB file #14 on the rev 7.10 back side, using that PDB file. Try using a different HAPPY drive as the destination drive. Remember that 810 and 1050 HAPPY drives are interchangable with the HAPPY BACKUP. Try more than once to make the backup. It is not necessary to re-read the source disk. The HAPPY BACKUP will let you make as many backups as you want. It may turn out that some backups made in the same session will work, and some will not. Try more than once to load the backup that is made. We have had trouble loading the original of these disks from time to time! Set the destination drive speed to 285 RPM (the lower end of the range allowed by our DIAGNOSTIC). Try using a different brand of disk as the destination disk. Make sure that the computer and drive you are trying to load the backup on will correctly load the original. Note that the original will need SLOW / UNHAPPY mode, while the backup made by this PDB file will automatically be in "FORCED SLOW MODE".

If all the above fails to make a satisfactorily working backup, and you did

not have another HAPPY drive to use as the destination drive, and you only have a HAPPY 1050, you might try the following. Inside the 1050 drive you will find a small rectangular sponge that pushes against the disk when you close the drive's door. This sponge's tension may make the disk rotational speed erratic. Only a minute variation in speed is needed to ruin the accuracy of the destination drive's skew aligned writing. Try removing the sponge to cure the problem.

If you still can't copy the disk, see the below section.

WHAT TO DO IF YOU CAN'T BACK IT UP

After exausting all of the normal methods, give our information machine a call if you have a USA touch tone phone. You can also call our information machine if you have a tone / pulse switchable phone and must dial using the pulse setting. Switch your phone to tone once the connection is established to select the message you want. The number is (408) 778-6092. It works 24 hours a day. You can call when the phone rates are cheapest. If we have found a way to back up a new program with our existing software, it will be announced on the information machine. Or if you have an update subscription, you will automatically receive updated information and software as these are released. Write our office for current information on the update subscription.

Since the HAPPY has already proven itself by making backups of thousands of different programs, we rely on our customers to inform us of any programs they are having difficulty with. When you write us, please tell us the name of the program and the publisher, and include a self addressed stamped envelope for our response. You may be instructed to send us the disk for our examination. When you send us a disk or disks, they must be originals. You must include return shipping and insurance fees if you want your disks back. USA addresses: $5.00, outside USA: $15.00.

If you have a problem backing up a disk, and this problem is unique to your system, HAPPY COMPUTERS can make a backup for you. We will give you the specifics on how to obtain this service when you write us. This is the case when HAPPY COMPUTERS has already seen the disk, and feels that persons with our system and current software should already be able to back it up.

Notes on REV 7.10 PDB files
Notes on REV 7.10 PDB files

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REV 7.10 has PDB files on the front and back of the WARP SPEED SOFTWARE disk. You may create a printout of PDB files and their information contents of any PDB disk side (even REV 7.00) by selecting 2 from this back side menu. The printout will always tell you the file number, which revision of software it is, which disk side it is from, the title displayed, whether or not a

displayed by the info screen for that PDB file.

When the HAPPY backup program tells you to "INSERT DISK THAT HAS PDB FILES INTO D1" you may insert either the front or the back of the rev 7.10 disk. There are different PDB files on each side.

The remainder of this document discusses the differences between the PDB

files of the previous rev 7.00 and the current rev 7.10.

All of the original 26 PDB files on the front side of the rev 7.00 disk are the same PDB file number on the front side of the rev 7.10 disk. If you used a particular PDB file to successfully make a backup of a program with rev 7.00, you may use that same PDB file number with 7.10.

There were some minor changes in some of these first 26 PDB files between rev 7.00 and rev 7.10, as noted below.

PDB file number 3 for ELECTRONIC ARTS programs has had its display info screen updated. RACING DESTRUCTION SET and MOVIE MAKER are removed from the list for PDB # 3. There is no change in the copying method of PDB # 3. RACING DESTRUCTION SET, MOVIE MAKER, and the newer program MAIL ORDER MONSTERS can be backed up without the need for a RUN TIME DISK using the new PDB file # 27 on the front of the rev 7.10 disk. Note: to eliminate the need for the RUN TIME DISK using PDB # 27, you must make the backup from the original disk, not from the backup made by PDB # 3 of rev 7.00.

PDB file number 4 for SYNFILE has had its display info screen updated to include a note to see this back side of the disk for help making and using the backup. There is no change in the copying method.

PDB file number 8 for ENCOUNTER and RAINBOW WALKER has had its copying method modified. Some persons encountered a problem copying RAINBOW WALKER with this PDB file on revision 7.00. With rev 7.10 this problem should not occur.

PDB file number 10 for ELECTRICIAN has had its display info screen updated to include a note to see PDB file #28. Some persons experienced a problem copying some versions of ELECTRICIAN with PDB # 10. If you did, then PDB # 28 should work! There is no change in the copying method for PDB # 10.

PDB file number 19 for MICROPROSE & others has had its display info screen updated to add SOLO FLIGHT to the list of MICROPROSE programs copied. There is no change in the copying method. The many programs that were later found to also be copyable with PDB # 19 are documented in new separate PDB files.

PDB file number 20 for SCANALYZER by Alpha Systems in rev 7.00 has had its title changed to Alpha Systems programs type #1 in rev 7.10. Also the display info screen has been updated to include a list of the other Alpha Systems programs that may be copied by this PDB file, and a note to see the new PDB file # 29 if you have trouble copying these programs. There is no change in the copying method of PDB # 20.